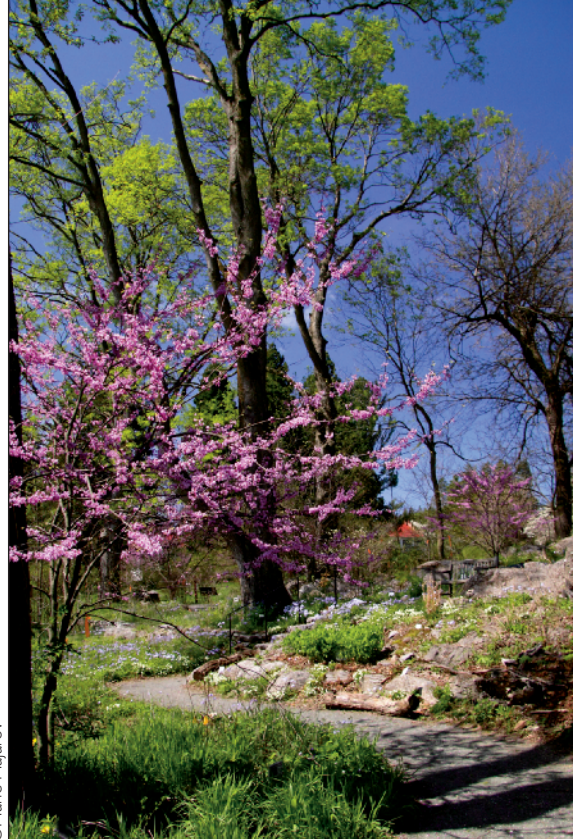


*Gardeners
across Virginia
can make
a difference.*



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Far left, you can learn a lot about native plants by walking a trail in your area, like this one at our state arboretum in Clark County. The importance of such plants, and their habitats, becomes all the more critical in the face of aggressive development, shown here.

NATIVE PLANTS *Rock!*

by Marie Majarov

“Plants are not optional...we can’t live without them!” Stirring words from Douglas Tallamy, entomologist, wildlife ecologist, and author of *Bringing Nature Home*. In his book, Tallamy makes an urgent call for awareness and grassroots action across our nation for gardeners to step up and take their place, along with the hard working wildlife managers of our protected lands, in preserving precious, life-sustaining biodiversity.

All too frequently, the indispensable role that plants play in our lives is taken for granted. Breathing, for example: How often do we consider that *every* oxygenated breath we take depends upon plants? And riparian and hillside plantings that keep beneficial rains from washing away rich topsoil while filtering out impurities protect our streams, water supply, and fish populations. Even more fundamental, plants—as the only organisms capable of photosynthesis—form the basis of the intricate food web that sustains wildlife right up

the food chain: insects, birds, fish, mammals, and ultimately, humans.

Gardening has long been an enjoyable hobby for many, an outlet for creative expression, and a source of natural beauty, fresh vegetables, and a refuge from our fast-paced, busy lives. Today it is so very much more. In short, what we plant has momentous implications for our future that cannot be ignored.

Native vs. Non-Native

Not all plants are created equal. Have you noticed that some leaves in your garden remain flawless, while others look thoroughly mutilated? Do birds and butterflies frequent your plantings? Are mowing, fighting weeds, watering, and fertilizing your landscape costly and time-consuming? Depending on your answers, you might find this article illuminating in making your landscape richer in beauty, more attractive to fascinating wildlife, and easier to maintain. Plant natives!

Native plant species are those that occur in the geological region or locale in which

they evolved and have developed deep, complex relationships with native wildlife. Natives are well adapted to the local soil and climate, chock full of nutrients tailored to the needs of wild animals that have shared their evolutionary history, and rugged in the face



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What could be more beautiful than a monarch butterfly nectaring on a fragrant common milkweed (*Asclepias syriaca*)?

of drought and disease, thereby encouraging a healthy, complex ecological balance of inter-related plants and animals species. Beautiful too, graceful oaks, hickories, serviceberry, bright yellow goldenrods, milkweeds, asters, and delicate spring ephemerals render an area a sense of place. The plants “belong.”

Alternatively, aliens, most often ornamental plants that have been imported for their supposed beauty and ease in landscaping, are not biologically or chemically attractive or palatable to native wildlife, (thus, the untouched leaves) and some are actually poisonous (such as Bradford pear). Even more tragic, freed from their natural competition and predators, many aliens become invasive. (Think autumn olive, kudzu, purple loosestrife, English ivy, Norway maple, garlic mustard, to name but a few.) Out-competing virtually everything in the landscape, aliens threaten the critical ecological balance and very survival of precious native flora and fauna. And then there are the hitchhikers traveling with these imports: alien diseases and insects. Examples from recent history include chestnut blight, Japanese beetles, and stink bugs.



©Marie Majarov

Native plantings don’t have to look wild and wooly; they can be designed to fit your style. You’ll be hooked by the wildlife they attract.

Biodiversity & Bird Food

Our wondrous array of native fauna performs an intricate variety of functions in service of our ecosystems. It cannot survive on alien plant species! Losses are mounting, and Tallamy feels this is a “clear signal that humanity’s life support systems are failing... Plants and animals are the rivets holding the ecosystems that sustain us together.”

But there is hope. Greater numbers of native plant species in home gardens enrich opportunities for native wildlife to obtain and pass on energy; thus, the numbers of native animals increase.

The Virginia Native Plant Society, whose mission is to protect Virginia’s native plants and native places and educate about their value, says, “Native plants are magnets!” The right natives in your backyard attract and sustain a fascinating array of native wildlife, including birds, butterflies, frogs, and especially, beneficial insects.

Yes, insects—a diverse, often under-appreciated, vital group of organisms—number four million species worldwide! (For perspective, birds number roughly 9,500 species.) Ninety-nine percent of these insects perform indispensable tasks: pollinating



Virginia's New Flora!

It's here! The long awaited *Flora of Virginia* with a cover fittingly graced with *Claytonia virginica* (spring beauty), in honor of renowned colonial botanist John Clayton, was published in December 2012, exactly 250 years (yes, you read that correctly) after its predecessor, the 1762 *Flora Virginica*.

A "Flora" is a technical plant guide that comprehensively identifies and describes plants in a particular region. Virginia's Flora contains descriptions for 3,164 native or well-established plants in the commonwealth, identified by family, genus, species, subspecies/varieties, habitat preferences, and frequency of occurrence. A dichotomous key, a series of yes/no questions, enables the user to narrow down the possibilities until a specimen is identified.

For many years Virginia botanists, naturalists, and conservationists have dreamed about and worked toward a state-of-the-art Flora. Identifying plants from limited references and adjacent state guides was arduous, and just not satisfactory. Taxonomy was constantly changing, and newly introduced non-native plants were taking hold at alarming rates. A new Flora was a daunting undertaking.

A labor of love and dedication, years of work began taking firm shape with the founding of the Flora of Virginia Project, 2001. Thanks to an agreement with the Division of Natural Heritage of the Virginia Department of Conservation and Recreation, talented biologists and ecologists spearheaded much of the work with the support of other partner organizations from across Virginia, including VNPS and countless individuals.

As a tool for identification and conservation, this Flora is only the beginning. With the help of the Virginia Environmental Endowment and VNPS, the Flora Project is creating a digital version envisioned for field use as a portable phone/tablet app (unimaginable even in 2001!). The Flora Project website (listed in "Resources") is the hub of a continuing effort and dream that the combination of print Flora and digital guides will be a springboard for meaningful educational programs and ongoing conversations among Virginia's plant enthusiasts at every level.



Caterpillars are a necessity for feeding bluebird chicks.

plants, keeping populations of insect herbivores in check, and aerating and enriching the soil—jobs often performed sight unseen. Perhaps most significantly, as prey, insects provide protein-packed food to numerous other species, and on up the food chain energy is passed.

Some numbers from Tallamy will illustrate the importance of insects. Most songbirds (bluebirds and chickadees, for example) exclusively feed insects, often caterpillars, to their young. Feeding about 20 times an hour means 300 or more insects/caterpillars per day; rearing just *one clutch* of young takes approximately 16 days, translating to the need for approximately 4,800 insects! Alien plants provide little or no food opportunities for these birds. Plant a native oak tree, however, and you have a tree capable of supporting 534 species of lepidoptera (butterflies and moths), an excellent source of bird food. Additionally, you have provided acorn mast for other wildlife and shelter for many.

Yes, native plants rock.

Taking Action

The Department of Game and Inland Fisheries (DGIF) supports Virginia's gardeners and landowners as partners in conserving biodiversity. In the face of prolific highway, urban, and suburban development, state and federal protected natural areas have become

fragmented, limited, and not enough to sustain crucial biodiversity on their own.

Habitat Partners® is DGIF's innovative outreach program to provide the public with practical "how to" information and education regarding the use of native plants to create or improve wildlife habitat in three key areas: at home, in the schoolyard, and on corporate properties.



If you have the right, moist woodland soil, Virginia bluebells (*Mertensia virginica*) can add spectacular beauty to your landscape.



A yellow-necked caterpillar in distinctive defensive posture; it feeds on a wide variety of hardwoods.

With the help of dedicated Habitat Education Coordinator Carol Heiser, exciting activities are happening all across the commonwealth, such as a monarch initiative in ten York County schools to develop butterfly gardens and coordinate nature activities with the Standards of Learning; individual home and landowners earning a Habitat Partners® certification for their gardening efforts; and

corporations planting natives to fill in empty lawns for soothing break spaces. A Habitat at Home® DVD was produced to illustrate several types of habitats (ex. woodland, butterfly, water) that can be created to complement a property's attributes.

Passionate about her 20 years of conservation efforts with DGIF, Heiser describes a central focus for her work as training an army of people (Virginia Master Naturalists and other DGIF volunteers being key) to be "habitat facilitators" with strong skill sets to educate on such topics as using native plants, pollinator habitat, warm-season grasses, conservation techniques, and inventory and monitoring methods to measure species presence. Heiser also serves in an advisory role to conservation groups such as the Chesapeake Conservation Landscaping Council, who provides support to gardeners and landowners in their conservation endeavors.

It is a mighty and vital challenge for gardeners to plant natives, enriching neighborhoods one garden at a time until, together, significant corridors and land mass of ecological richness will stretch across Virginia to protect biodiversity.

Survey your yard. Read *Bringing Nature Home*. Check out *Habitat at Home*®. Join VNPS. Native plants and natural landscaping advice abound in the resources listed here. Get your children, our future stewards, involved.



The native white fringetree (*Chionanthus virginicus*) is a magnificent native shrub that smells wonderful and provides color year-round.



Plant natives and you just might find an Eastern box turtle lumbering through your yard.

Most of all, follow the words Dr. Tallamy inscribed in my copy of his book, "Garden as if life depended on it!" 🌿

Virginia Master Naturalist Marie Majarov (www.majarov.com) lives in Winchester where, with her husband Milan, she maintains a rich butterfly garden of natives.

Resources

- *Bringing Nature Home* by Douglas W. Tallamy. Published by Timber Press, 2009. Website for book and native plant information: www.plantanative.com
- Chesapeake Conservation Landscaping Council: www.chesapeakelandscape.org
- *Flora of Virginia* by Alan S. Weakley, J. Christopher Ludwig, and John F. Townsend. Published by BRIT Press, 2012
- Flora of Virginia Project: www.floraofvirginia.org/floraproject.shtml
- Habitat at Home® Booklet, DVD, and extensive habitat information: www.dgif.virginia.gov/habitat
- Virginia Master Naturalists: www.virginiamasternaturalist.org
- *Native Plants for Conservation, Restoration, and Landscaping*: www.dcr.virginia.gov/natural_heritage/nativeplants.shtml
- Virginia Native Plant Society: www.vnps.org